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Panelboards

National Electrical Manufacturers Association

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FOREWORD

This standards publication is intended to provide a basis of common understanding within the electrical community by aiding the user and specifier in properly selecting panelboards for specific applications by stating:

a. The general standards for panelboards including the types, insulating requirements, unusual service conditions, service equipment requirements, ampacity, and markings
b. Standard panelboard ratings including short circuit current ratings
c. Test procedures and tests for panelboard design and production
d. Manufacturing standards for panelboards
e. Panelboard application standards to provide proper selection of a panelboard and its components to ensure satisfactory service

PB 1-2011 completely revises and supersedes PB 1- 2006.

These standards are periodically reviewed by the Panelboard and Distribution Board Section of NEMA for any revisions necessary to keep them up-to-date with advancing technology. User needs have been considered throughout the development of this publication. Proposed or recommended revisions should be submitted to:

Vice President, Technical Services
National Electrical Manufacturers Association
1300 North 17th Street, Suite 1752
Rosslyn, Virginia 22209

This standards publication was developed by the Panelboard and Distribution Board Section. At the time it was approved, the section was composed of the following members:

ABB, Inc.—New Berlin, WI
Cooper Bussmann—St. Louis, MO
Eaton Corporation—Pittsburgh, PA
The Durham Company—Lebanon, MO
GE Industrial Solutions—Plainville, CT
Hubbell, Inc.—Bridgeport, CT
Penn Panel & Box Company—Collingdale, PA
Reliance Controls Corporation—Racine, WI
Schneider Electric—Palatine, IL
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Section 1
GENERAL

1.1 SCOPE

This standards publication covers single panelboards or groups of panel units suitable for assembly in the form of single panelboards, including buses, and with or without switches or automatic overload protective devices (fuses or circuit breakers), or both. These units are used in the distribution of electricity for light, heat, and power at 600 volts and less with:

a. 1600-ampere mains and less
b. 1200-ampere branch circuits and less

Specifically excluded are live-front panelboards, panelboards employing cast enclosures for special service conditions, and panelboards designed primarily for residential and light commercial service equipment.

1.2 REFERENCED STANDARDS

American National Standards Institute
11 West 42nd Street
New York, NY 10036

ANSI Z535.4 *Product Safety Signs and Labels*

Underwriters Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062

ANSI/UL 67 *Panelboards*

Institute of Electrical and Electronics Engineers, Inc. (IEEE)
445 Hoes Lane, P.O. Box 1331
Piscataway, NJ 08855-1331

IEEE 141 Electric Power Distributions *for Industrial Plants*

National Electrical Manufacturers Association
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NEMA 250 *Enclosures for Electrical Equipment (1000 Volts Maximum)*

NEMA AB 1 *Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit Breaker Enclosures (UL 489)*

NEMA FU 1 *Low-Voltage Cartridge Fuses*

NEMA KS 1 *Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum)*